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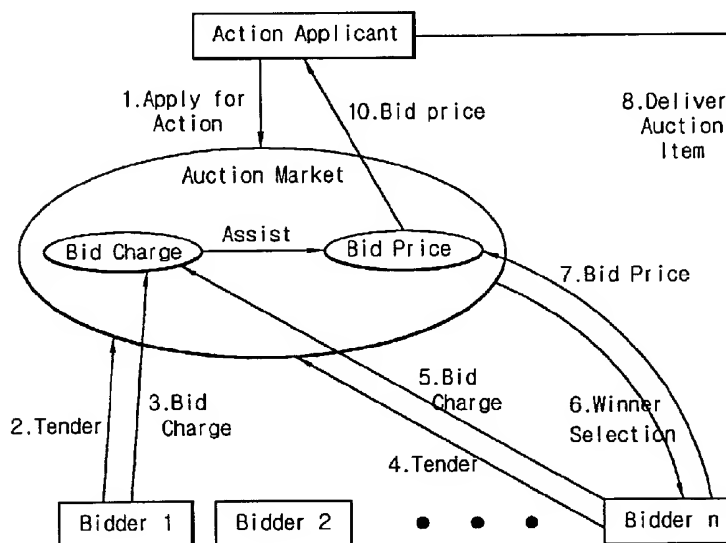
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(54) Title: SYSTEM AND METHOD OF AUCTION



(57) **Abstract:** A system and method for conducting a multi-person auction via a computer and communications network is provided. The system allows a small amount of charges for a bid to be collected when the participants place bids over a network, and assists a winner financially by cutting down the winner's expense by the total collected amount from the bidders. The auction mechanism is divided into multiple steps. Sellers apply for putting items up at an auction. Bids are invited and commenced for the items. The device displays auction items on the user's terminal. Participants bid for the auction items. It collects small amount of charges from the bidders at the beginning of bid, determines a winner of the participants based on the bids, makes a charge for the price of the sold item, delivers the item to the winner and pays the seller price of the item.

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## SYSTEM AND METHOD OF AUCTION

### TECHNICAL FIELD

The present invention relates to a computer auction system and method thereof.

More particularly, the present invention relates to the system and method for conducting a multi – person auction via computer and communication network, which comprises allowing charges for the auction participants and assisting a winner financially by cutting down the winner's expense with the collected amount of charges.

### BACKGROUND ART

Presently, traditional auctions have been performed by using several methods described below; (1) the typical auction method conducted in court by submitting documents, (2) the hand – signaling method exploited in the auction of agricultural and marine products by the person registered in the auction dictionary, (3) the computer auction method comprising applying for members over a internet, offering a tender and paying an auction price, if a successful bid, with a bank account and a credit card and so on.

The auction methods have a common feature paying back a bid deposit for the auction participant. The bid deposit is a security charge which is paid prior to the auction and is repaid, if not awarded, to the participant. Therefore, the bid deposit has been enforced only to urge the payment of an auction price.

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## DISCLOSURE OF INVENTION

The object of the present invention is to provide an auction system and a method creating a new profit structure.

Particularly, the present invention provides the auction system and the auction method in which the auction deposit assists the bidding price. The auction system and the method of the present invention are composed of several processes imposing an auction charge to a bidding participant and supporting a winner's expense with the charge collected from bidders and so on. Further features of the present invention will appear hereinafter.

In order to accomplish the object of the present invention, the auction system of the present invention is composed of a computer terminal, a server computer and an open type network connecting the computer terminal and the server.

Concretely, the server computer includes an auction item database (DB) containing the goods information for bids; a bid DB containing bidding contents for the auction item; a display module showing the auction items of the auction item DB on the computer terminal; an auction module storing the bidding contents in the bid DB when a client offers a bid for the auction goods and selecting a winner when the auction is over; a bidding charge collection module charging a bidding fee from the computer terminal participating in the auction; a winner expense collection module imposing a bidding price to the winner.

In detail, the computer terminal has a feature which includes a collection device allowing the bidding charge and the bidding price of the item knocked down.

The collection device also has a feature which pays the charge by using

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one or more than one means selected among electronic cache, mobile telecommunication, credit card, cyber money, small amount settlement card and deposit without bank passbook.

The auction module for selecting a winner has features which selects a successful bidder offering the highest price within a limited time period, adopts the last bidder when an additional bidder does not exist except the last within a known time period, and decides a winner at the highest price which is predetermined before awarding.

The display module has a feature which illustrates one or more than one information which is/are selected among the highest tender price offered up to now, the current number of bidders and the total amount of collected auction charges onto the computer terminal additionally.

The bidding price collection module has a feature which receives only the part of the auction price in the collection process because some of the bidding price is compensated with the security charge of the bid obtained previously.

In addition, the auction method of the present invention is composed of several steps described below.

Particularly, the auction method comprises an initiation step applying for putting items up at an auction by sellers; a displaying step showing the auction items for bidders; a bidding step offering a tender by bidders; a bidding charge collection step receiving security charges from the bidders; a successful bidder selection step adopting a winner among one or more than one bidders; a bidding price collection step receiving the price of the auction item from the winner; a delivery step sending the auction item for the winner; and a bidding price payment step allowing the price for the auction applicant.

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The collection step such as the bidding charge collection step and the bidding price collection step has a feature which pays the fees by using one or more than one means selected among electronic cache, mobile telecommunication, credit card, cyber money, small amount settlement card and deposit without bank passbook.

The successful bidder selection step has features which selects a winner offering the highest price within a limited time period, adopts the last bidder when an additional bidder does not exist except the last within a known time period, and decides a successful bidder at the highest price which is predetermined before awarding.

The displaying step has a feature which demonstrates one or more than one information which is/are selected among the highest tender price offered up to now, the current number of bidders and the total amount of auction charges onto the computer terminals additionally.

The auction method of the present invention also has a feature in which the number of bidding trials is restricted for the bidders.

The bidding price collection step has a feature which receives only the part of the auction price in the collection process because some of the total price is compensated by the security charges of the bid obtained previously.

In the specification of the present invention, the term “ item ” designates both product with shape and amorphous product without shape. Generally, the item means morphological product such as desk, chair, computer and so on. However, the item of the present invention includes both material object and immaterial object terminologically. For example, immobile property such as building and real estate; intellectual property such as patent right, utility model right, design right, trademark right, copyright; appointments such as treating

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prominent people to lunch; are within the scope of the item term described in the present invention.

In addition, the term “ delivery ” denotes the transport of morphological product from one place to another usually. However, the delivery of the present invention contains the execution processes of some contracts. For example, owner changes of real estate, assignment of the intellectual property, fulfillment of promises and so on are within the scope of the term delivery of the present invention. The above terminology will appear with said meaning hereinafter.

As described above, the present invention has some advantages below. The security charge of a small amount is paid prior to bidding processes and is collected by using a small amount settlement means. Then the collected charges are utilized to assist a successful bidder by deducting the bidding price. Therefore, the successful bidder can buy the same item by paying a lower price like a fortune such as a lottery ticket.

Since, the bidders of the present invention expect that the bidding price could be cut down by the bidding charges, the bidding price will be determined at a higher cost. For auction applicants, the auction process increases the probability earning much money from the higher bidding price. Interestingly, a successful bidder can receive the auction goods freely and preferably can obtain the goods with receiving some additional money when the large amount of bidding charges are collected from a number of bidders.

#### BRIEF DESCRIPTION OF THE DRAWINGS

The above and other objects, features and other advantages of the present

invention will be more clearly understood from the following detailed description taken in conjunction with the accompanying drawings, in which;

Fig. 1 represents a schematic diagram of the present invention.

Fig. 2 represents the system architecture of an embodiment according to the present invention.

Fig. 3 is a flow chart of an embodiment according to the present invention.

\*\*\*\*\* Explanation of symbols in the figures \*\*\*\*\*

- 10 : computer terminal
- 11 : payment device
- 20 : server computer
- 21 : auction item DB
- 22 : bid DB
- 23 : display module
- 24 : auction module
- 25 : bidding charge collection module
- 26 : bidding price collection module
- 30 : internet network
- 100 : initiation step
- 200 : bidding step
- 300 : bidding charge collection step
- 400 : winner selection step

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500 : bidding price collection step

600 : delivery step

700 : bidding price payment step

### BEST MODE FOR CARRYING OUT THE INVENTION

Practical and presently preferred embodiments of the present invention are illustrated as shown in the following embodiments.

However, it will be appreciated that those skilled in the art, on consideration of this disclosure, may make modifications and improvements within the scope of the present invention.

**Fig. 1** shows a schematic diagram of the present invention. As demonstrated in **Fig.1**, sellers apply for the auction market according to the order of designated numbers. The auction market administrator commences the auction for the item provided by the bid applicant and then a number of bidders (bidder 1, bidder 2, bidder 3, ..... bidder n) offer tenders by paying bidding charges. If the auction goods are awarded to the bidder n, the successful bidder should pay only the bidding price which is deducted by some bidding charge collected and supported above. Then, the auction market demands the seller to deliver the above auction goods for the winner and the bid applicant sends the goods. Finally, the auction market administrator sends the bidding price containing the amount assisted from the bidding charge for the sellers.

**Fig. 2** shows the system architecture of an embodiment according to the present invention.

As demonstrated in **Fig. 2**, the system architecture comprises a computer



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terminal (10), a server computer (20) and an internet network (30, open type network). The computer terminal (10) contains a payment device (11). The payment device (11) can be an apparatus sending a bidding charge and a bidding price toward the server computer (20) and includes receipt means with which the bidder owning the computer terminal (10) pays for the administrator of the server (20) by using a deposit without bank passbook.

Concretely, the server computer (20) comprises an auction item database (DB) (21), a bid DB (22), a display module (23), an auction module (24), a bidding charge collection module (25), a bidding price collection module (26), and a central processing unit (CPU: the symbol of the figure not noted) loading several modules and an internet connection apparatus (the symbol of the figure not noted) connecting the sever computer (20) to an internet network (30).

The auction item DB (21) stores the product information which relates to the auction processing and the auction scheduling. The display module (23) sends the auction information of the auction item DB (21) electronically so as to be illustrated onto the user's computer terminal (10). The auction module (24) takes the bid goods toward the auction market and stores the bidding contents of the offered item in the bid DB (22). Also, the auction module (24) plays a role to select at least one more winners by using the database. In order to offer a bid by the process of the present invention, the bidding charge should be submitted previously. Thus the bidding charge collection module (25) performs the collection process of bidding fees. In detail, the bidding charge can be determined by using various standards such as 1%, 0.1% of the bidding price and can be changed in accordance with items. Preferably, the charge should be measured within a limit, which is not burdensome on the bidder. Then the bid price should be charged from a successful bidder selected by using the auction module (24), which is performed by using the bidding price

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collection module (26). As represented in figures, a number of modules are depicted regarding function units. Possibly, the above modules can be divided into sub modules and can be integrated.

In the figures of the present invention, the server computer (20), the internet network (30) and the computer terminal are illustrated on the web - basis. However, the server computer (20) can be a server offering services toward mobile telecommunication and the internet network (30) can be an open type network which can be replaced by using the combination of telecommunication networks or by using only telecommunication network. And the computer terminal (10) can be displaced with a mobile phone.

**Fig. 3** shows a flow chart of an embodiment according to the present invention.

As described in **Fig. 3**, the auction method of the present invention comprises the initiation step (100) commencing the auction, the bidding step (200) offering a tender by using a bidder's terminal, the bidding charge collection step (300), the successful bidder selection steps (400), the bidding price collection step (500) receiving the bidding price and the assisted charge, the delivery step (600) sending the auction item to the winner and the bidding price payment step (700) allowing the bidding price for the bid applicant.

The bidding charge collection step (300) receives the regular amount or the constant ratio of the price from the bidder's computer terminal. For example, 0.1 % or 1 % of the bidding fee is charged and collected entirely and then the part of the bidding fee collected is programmed to assist the bidding price for the successful bidder.

In the bidding price collection step (500), the bidding price can denote the value which the successful bidder has offered or can be the value which

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deducts the assisted amount of the bidding charge. The figures of this specification illustrate the price deducting the bidding charge and the submission of the reduced price to the market administrator. In case that the bidding price is received normally, the administrator makes the auction goods sent for the winner by using proper methods (delivery step : 600).

In case that the delivery has been completed, the administrator pays the bidding price for the bid applicant (bidding price payment step : 700).

The collection of the bidding charge and the bidding price can be accomplished by using the small amount settlement means which is introduced over an internet recently. Particularly, the web site advertisement using the method of the present invention (for example, banner advertisement) can pay cyber money by a click, which is exploited for the settlement of cyber money. In addition, the contract with the specified bank facilitates the remittance by exempting or reducing the sending fees. Besides, the mobile phone settlement is also utilized for mobile phone subscribers by summing rates.

The selection of the successful bidder is performed by using various methods of the present invention. Precisely, the successful bidder offering the highest price within a limited time period is adopted in the conventional auction. And the winner is the last bidder when an additional bidder does not exist except the last within a known time period. For example, the last bidder can be a winner when an additional bidder is absent within 5 minutes. Also, the successful bidder is decided at the highest point that is the predetermined price. For example, like a 10 - won auction of cyber biddings, the highest price is measured previously as 10,000 won and any bidder can apply at certain point that increases with 10 won unit from 10 won only if any one offers a bid. Then a winner is selected at a specific point or at 10,000 won.

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In the bidding process, the highest bidding price offered up to now, the current number of bidders or the total amount of the security charge collected can be disclosed.

Furthermore, the number of bidding trials can be restricted in the process of the present invention. The bidding trial of the present invention requires the security charge, which causes problems such as heavy burden of the bidding charge. Hence, the number of the bid can be limited in every auction item. For example, 5 bidding trials per one item or 10 bidding trials per day are utilized as a standard.

The auction method of the present invention can be applied for a reverse auction. Namely, if a buyer applies for obtaining some product, a provider offers a bid to deliver goods with certain price. Also, some % of the bidding price can be determined as a bidding charge and the part of the bidding charge can assist the deduction of the bidding price. The processes reduce the bidding price contrary to that of the typical reverse auction. Consequently, the bidding applicant can expense less money to buy the same goods and the provider can earn more money than the bidding price due to the part of the bidding charge. Especially, the reverse auction process can be exploited to perform a recent B2B business (corporate versus corporate deal) effectively. At that time, the bidding charge can be displaced with goods.

The auction process of the present invention can be applied for mobile telecommunications. However, additional process is required for the appliance to mobile phone. For example, the mobile phone makes a modified pattern of the 10 - won auction proceed. Namely, the initial price of the auction product is determined as 1,000 won and the price increases with 10 won unit by a click. Usually, in the 10 - won auction the highest price is fixed and the

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bidding product is given to a person clicking at the highest point of the price. However, the auction process of the present invention does not decide the highest price previously and the last bidder is selected as a winner if any person does not offer a bid within a limited time period (for example, 1 minute). In the above process, the bidding charge is 10 won and the current bidding price is illustrated. All the bidding charge is collected and then used to support a successful bidder partly. At that time, if the initial price is 1,000 won and the current bidding price is 15,000 won, the total amount of the bidding charge is 14,000 won. And then if 50% of the total amount of the bidding charge is given to a successful bidder, the winner can receive 7,000 won and as a result, can buy the auction item only with 8,000 won.

The auction process of the present invention introduces the bidding charge concept which has not been tried till now and makes the winner have fun as dealing a lottery ticket or betting since it takes away the bidding charges to the winner mostly.

The auction process of the present invention also shows the large amount of charges collected from small amounts and demonstrates a new profit model. Precisely, the bidding charge is collected in 10 won unit or 100 won unit which is not burdensome for an individual person, but the winner can obtain a big profit with the collected charges and the bid applicant can sell the auction product with a higher price.

Those skilled in the art will appreciate that the conceptions and specific embodiments disclosed in the foregoing description may be readily utilized as a basis for modifying or designing other embodiments for carrying out the same purposes of the present invention.

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Those skilled in the art will also appreciate that such equivalent embodiments do not depart from the spirit and scope of the invention as set forth in the appended claims.

# **WHAT IS CLAIMED IS:**

1. An auction system comprising a computer terminal, a server computer and an open type network connecting said computer terminal and said server computer;

in which the server computer includes an auction item database (DB) containing goods information for bids; a bid DB containing bidding contents for an auction item; a display module showing the auction item of the auction item DB on the computer terminal; an auction module storing the bidding contents in the bid DB when a client offers a tender for the auction product and selecting a winner when the auction is over; a bidding charge collection module charging a bidding fee from the user's computer terminal; (6) a winner expense collection module imposing the bidding price to the winner; and

in which the computer terminal includes a collection device paying the bidding charge and the bidding price of the item knocked down.

2. The auction system according to claim 1,

in which the collection device is one or more than one means selected among electronic cache, mobile telecommunication, credit card, cyber money, small amount settlement card and deposit without bank passbook.

3. The auction system according to claim 1,

in which the auction module for selecting a successful bidder adopts a winner offering the highest price within a limited time period, selects the last bidder when an additional bidder does not exists except the last within a known time period, and decides a winner at the highest price which is predetermined before awarding.

4. The auction system according to claim 1,

in which the display module illustrates one or more than one information which is selected among the highest tender price offered up to now, the current number of bidders and the total amount of auction charges on the computer terminal additionally.

5. The auction system according to any claim among claim 1 ~ 4,

in which the bidding price collection module receives only the part of the total bidding price in the collection process because some of the bidding price is assisted by the security charges paid.

6. An auction method comprising an initiation step applying for putting items up at an auction by sellers; a displaying step showing the auction item for bidders; a bidding step offering a tender by the bidders; a bidding charge collection step receiving a bidding charge from the bidder; a successful bidder selection step adopting a winner among one or more than one bidders; a bidding price collection step receiving the item price from the winner; a delivery step sending the auction item for the winner; and a bidding price payment step allowing the price for the auction applicant.

7. The auction method according to claim 6,

in which the collection step such as the bidding charge collection step and the bidding price collection step pays the fee by using one or more than one means selected among electronic cache, mobile telecommunication, credit card, cyber money, small amount settlement card and deposit without bank passbook.



**8.** The auction method according to claim 6,

in which the successful bidder selection step adopts a winner offering the highest price within a limited time period, selects the last bidder when an additional bidder does not exist except the last within a known time period, or decides a successful bidder at the highest price which is predetermined before awarding.

**9.** The auction method according to claim 6,

in which the displaying step illustrates one or more than one information which is selected among the highest tender price offered up to now, the current number of bidders and the total amount of auction charges on the computer terminal additionally.

**10.** The auction method according to claim 6,

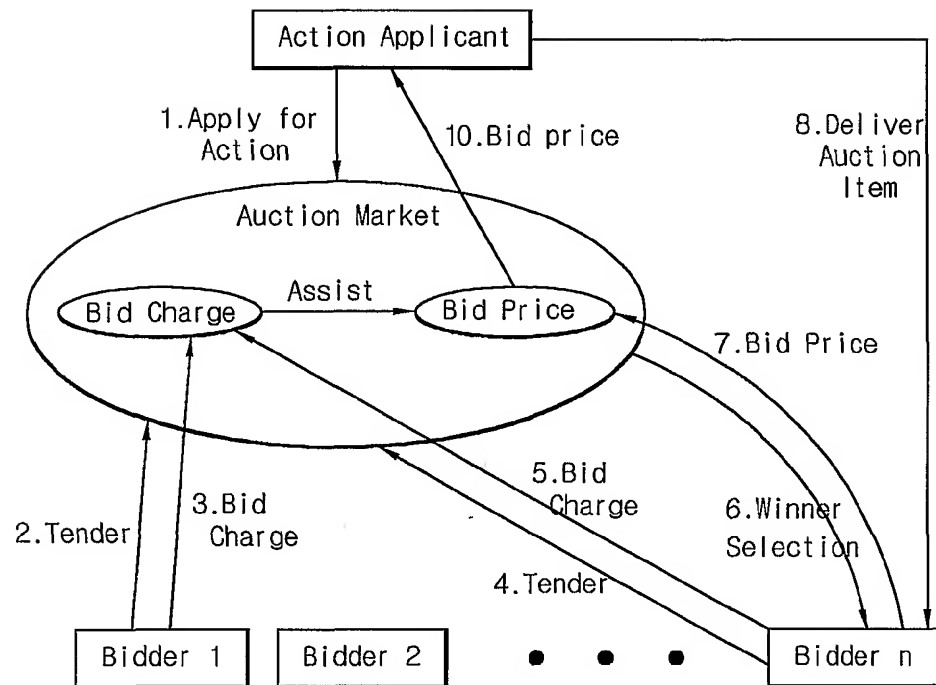
in which the number of bidding trials is restricted for the bidder.

**11.** The auction method according to any claim among claim 6 ~ 10,

in which the bidding charge collection step receives only the part of the auction price in the collection process because some of the total price is deducted by the security charge collected.

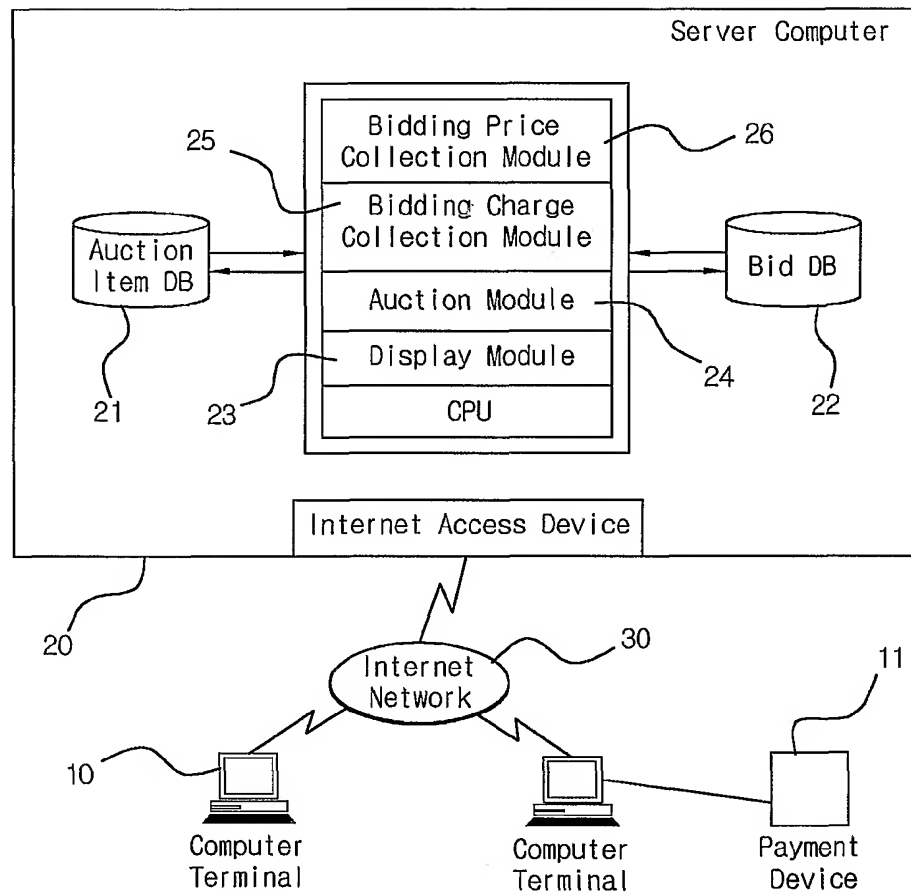
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Fig. 1



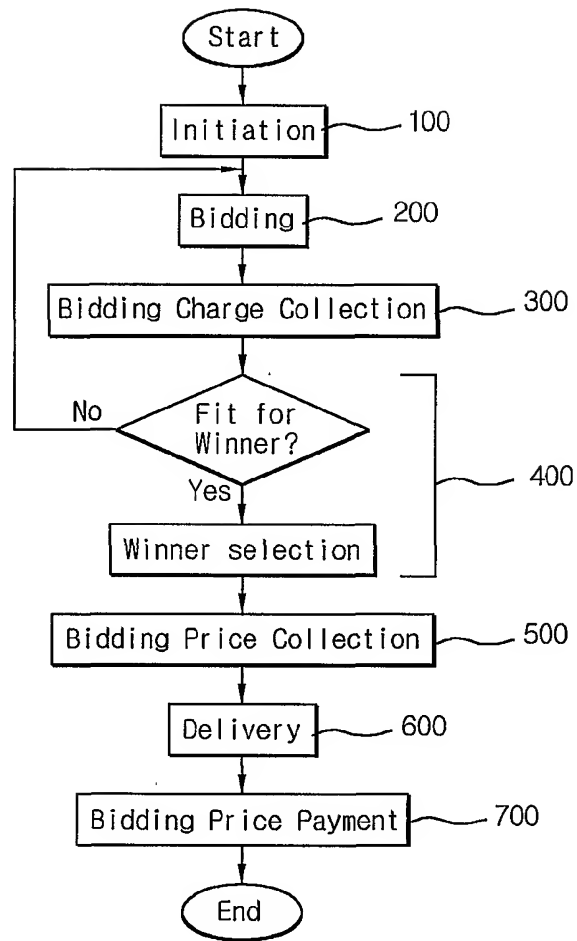
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Fig. 2



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Fig. 3



## INTERNATIONAL SEARCH REPORT

International application No.

PCT/KR01/00666

**A. CLASSIFICATION OF SUBJECT MATTER**
**IPC7 G06F 17/60**

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC7 G06F 17/60

Documentation searched other than minimum documentation to the extent that such documents are included in the files searched

Korea Patents and applications for inventions since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6023686 A (HEALTH HERO NETWORK) 8 FEBRUARY 2000 see the claim	1,6
P, A	KR 2000-37039 A (JUNG SANG KWON) 5 JULY 2000 see the abstract	1,6

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

\* Special categories of cited documents:

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"&amp;" document member of the same patent family

Date of the actual completion of the international search

21 AUGUST 2001 (21.08.2001)

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